

(19) 世界知的所有権機関
国際事務局(43) 国際公開日
2004 年 4 月 15 日 (15.04.2004)

PCT

(10) 国際公開番号
WO 2004/032130 A1(51) 国際特許分類⁷: G11B 7/24, 7/26, B41M 5/26

(21) 国際出願番号: PCT/JP2003/012464

(22) 国際出願日: 2003 年 9 月 30 日 (30.09.2003)

(25) 国際出願の言語: 日本語

(26) 国際公開の言語: 日本語

(30) 優先権データ:
特願2002-288594 2002 年 10 月 1 日 (01.10.2002) JP(71) 出願人 (米国を除く全ての指定国について): 松下電
器産業株式会社 (MATSUSHITA ELECTRIC INDUS-
TRIAL CO., LTD.) [JP/JP]; 〒571-8501 大阪府 門真市
大字門真1006番地 Osaka (JP).

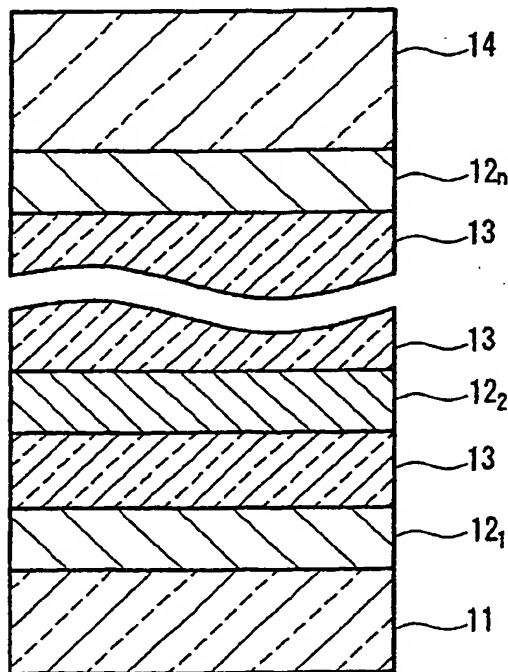
(72) 発明者; および

(75) 発明者/出願人 (米国についてのみ): 北浦 英樹
(KITAURA, Hideki) [JP/JP]; 〒619-0237 京都府 相楽
郡 精華町 光台4丁目33-1 Kyoto (JP). 山田 昇 (YA-
MADA, Noboru) [JP/JP]; 〒573-1104 大阪府 枚方市 楠
葉丘1丁目4-2 Osaka (JP).(74) 代理人: 特許業務法人池内・佐藤アンドパートナ-
ーズ (IKEUCHI SATO & PARTNER PATENT ATTOR-
NEYS); 〒530-6026 大阪府 大阪市 北区天満橋1丁目8
番30号OAPタワー26階 Osaka (JP).(81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB,
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK,
DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI,

[続葉有]

(54) Title: OPTICAL INFORMATION RECORDING MEDIUM AND METHOD FOR MANUFACTURING SAME

(54) 発明の名称: 光学的情報記録媒体とその製造方法



(57) Abstract: An optical information recording medium comprises the first to n information layers (here n is an integer not less than 3) arranged in this order from the side on which a laser light is incident. Each information layer includes a recording layer containing Te, O and M (here M represents at least one element selected from the group consisting of Al, Si, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, Zr, Nb, Mo, Ru, Rh, Pd, Ag, In, Sn, Sb, Hf, Ta, W, Re, Os, Ir, Pt, Au and Bi). The concentrations of oxygen atom contained in the recording layers of the first to $n-1$ information layers, namely $C(1)$ to $C(n-1)$, satisfy the following relations: $C(1) \geq C(2) \geq \dots \geq C(n-2) \geq C(n-1)$ and $C(1) \neq C(n-1)$. When the number of the information layers is two, the oxygen atom concentration of the first information layer is made larger than that of the second information layer.

WO 2004/032130 A1

[続葉有]



NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

OAPI 特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:

— 国際調査報告書

(84) 指定国 (広域): ARIPO 特許 (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR),

2 文字コード及び他の略語については、定期発行される各 PCT ガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(57) 要約:

本発明の光学的情報記録媒体には、レーザー光入射側から順に、第 1 ～第 n (n は、3 以上の整数である。) 情報層が設けられている。全ての情報層は、それぞれ、Te、O 及び M (但し、M は、Al、Si、Ti、V、Cr、Mn、Fe、Co、Ni、Cu、Zn、Ga、Ge、Zr、Nb、Mo、Ru、Rh、Pd、Ag、In、Sn、Sb、Hf、Ta、W、Re、Os、Ir、Pt、Au、Bi から選ばれる少なくとも一つの元素) を含む記録層を含んでいる。第 1 ～第 $n-1$ 情報層の各記録層に含まれる酸素原子含有濃度 $C(1) \sim C(n-1)$ は、 $C(1) \geq C(2) \geq \dots \geq C(n-2) \geq C(n-1)$ で、且つ、 $C(1) \neq C(n-1)$ の関係を満たしている。また、情報層が 2 層の場合は、第 1 情報層の酸素原子含有濃度を第 2 情報層よりも大きくする。

INTERNATIONAL SEARCH REPORT

International application No.

T/JP03/12464

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ G11B7/24, 7/26, B41M5/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ G11B7/24, 7/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2003
Kokai Jitsuyo Shinan Koho	1971-2003	Jitsuyo Shinan Toroku Koho	1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-251778 A (Matsushita Electric Industrial Co., Ltd.), 06 September, 2002 (06.09.02), Full text; all drawings & EP 1215669 A2	1-10
Y	JP 2002-133712 A (Matsushita Electric Industrial Co., Ltd.), 10 May, 2002 (10.05.02), Full text; all drawings & EP 1180767 A2	1-10
Y	JP 9-7224 A (Hitachi, Ltd.), 10 January, 1997 (10.01.97), Full text; all drawings (Family: none)	1-10

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search
15 December, 2003 (15.12.03)Date of mailing of the international search report
13 January, 2004 (13.01.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/JP03/12464

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2002-50053 A (TDK Corp.), 15 February, 2002 (15.02.02), Par. No. [0111] & EP 1178472 A2 & US 2002/21656 A1	1-10
Y	JP 2002-117585 A (TDK Corp.), 19 April, 2002 (19.04.02), Par. No. [0100] & EP 1162614 A2 & US 2002/9045 A1	1-10
Y	JP 60-131650 A (Matsushita Electric Industrial Co., Ltd.), 13 July, 1985 (13.07.85), Full text; Fig. 2 (Family: none)	1-10